

ABSTRACT

The present invention provides a method, computer program product, and apparatus and control system and method for providing substantially uninterrupted power to a load. The apparatus includes a control system coupled with an electrical power storage subsystem and a electrical power generator. The control system is configured to provide a plurality of modes of operation including at least a static compensator (STATCOM) mode, an uninterruptible power supply (UPS) mode and a generator mode (gen set), and to control transitions between each of the plurality of modes. In one embodiment, the control system is an integrated closed loop control system that includes a current control system and a voltage control system. The apparatus is capable of operating at least two of the plurality of modes simultaneously, including ramping the gen set mode up and simultaneously ramping the UPS mode down as the gen set mode is ramped down.